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ABSTRACT

The purpose of this study was to determine which communication competencies will be essential to those entering a business or a profession in 1980. The 107 subjects used were "experts" in the area of business and organizational communication who responded to four questionnaires. It was concluded that college courses designed to enhance one set of communication skills, such as technical writing and public speaking, will no longer fulfill the requirements for undergraduate business and professional students. The results of the study and the communication skills needed in 1980 are presented in narrative and table format. (RB)

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The Identification of Communication Competencies Required by Future Businesspersons: An Application of the Delphi Method

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The Identification of Communication Competencies Required by Future Businesspersons: An Application of the Delphi Method[1]

Since 1969 the American educational process has been greatly influenced by the concept of accountability (Lessinger, 1971). The primary goal of accountability is that educators accept responsibility for the output of the educational system. Essential to the successful implementation of educational accountability is the specification of instructional objectives for learners (Smythe, Kibler & Hutchings, 1973). Specifying learning objectives in the classroom permits measurement of educational results by assessing the degree of success each student achieves in mastering particular goals.

The specification of worthwhile objectives requires that those behaviors or skills critical to a student's future needs be identified. Toffler (1970) advises that "nothing should be included in a required curriculum unless it can be strongly justified in terms of the future (p. 409)." For undergraduate courses in business and organizational communication, emphasis must be placed on the communication skills which graduating students entering a business or profession will use the most.[2]

Examination of previous investigations of business communication skills reveals three shortcomings that limit the usefulness of the findings to those instructors wishing to establish worthwhile educational objectives.

First, the majority of the previous investigations are limited to particular geographic locals, e.g., California, Iowa, New York City (Bennett, 1971; Dubin & Marlow, 1965; Dubin, Alderman & Marlow, 1968; Morrow, 1970; Samovar, Brooks, & Porter, 1969; Sayles, 1963; Tacey, 1960; Zaugg, 1973). Previous investigations are also geographically limited in that research has been conducted only on graduates of particular universities (Di Salvo, Larsen, & Seiler, 1974; Zacharias, 1968). A final form of geographic limitation results when only the needs of members of a particular organization or combination of organizations are investigated (Brisley, 1957; Elliot, 1962; Freshley, 1955; Jain, 1971; Madden, 1967; Nilsen, 1953; Simons, 1961). The unfortunate consequence of the geographic limitations identified above is the inability of the investigator to validly extend his findings any further than the particular setting he examined.

A second limitation is that research to date has largely ignored those who teach business or organizational communication courses. Assuming that university faculties are familiar with the current literature and new developments, as well as the projections for future needs, it seems reasonable to assume that their opinions are of value (Dubin & Marlow, 1965). The decisions about what to teach in business communication courses will ultimately be based on the judgments of those who teach such courses. By limiting past studies only to observations of those in business, a large reservoir of expert opinion based on the experiences of observation, research, and teaching has not been efficiently tapped.

The third and most serious weakness of previous research is the assumption that by identifying current needs educators can predict future requirements. Given the accelerated rate of change in business environments (Bennis & Slater, 1968; Toffler, 1970), educators cannot assume that skills identified in 1974 as

essential competencies will be the skills needed by businesspersons in the 1980's. If the communication courses taught are to be relevant to students' needs (i.e., if the curriculum is to be future-oriented) those who plan and teach the courses must begin now to ascertain what communication skills will be needed.

Therefore, the purpose of the present study was to determine which communication competencies will be most essential to those entering a business or profession in 1980. The opinions of experts in the areas of business and organizational communication concerning the communication needs of future businesspersons were solicited through a nationwide Delphi survey. Using the results of this investigation, instructors should be better equipped to plan future-oriented communication courses for business and professional students.

Method

Many decisions concerning the choice of future alternatives will be made, not on "solid generalizations from observation (Dalkey, 1967, p. 1)," but on advice, intuition, or opinion given by an expert or group of experts. As such, it seems reasonable to attempt to refine expert opinion so decision makers are more likely to make an optimal decision. The Delphi technique, developed by the RAND Corporation in the late 1940's, is such a process. Delphi requires that members of a group knowledgeable in a particular area evaluate a set of items concerning that area over a series of written questionnaires. Each successive round contains summary data concerning the group's collective position from the previous round to aid the experts in refining their opinions and ratings. In addition, those who disagree with the group's opinion are encouraged to provide reasons for so doing, thereby generating a silent debate among participants. Given the nature of the problem of predicting future communication needs, the Delphi technique was judged to be the most appropriate research methodology available for this study.[3]

Participants

Experts in the areas of business and organizational communication were identified in two ways. First, the names of those persons serving as associate editors in the area of business or organizational communication were requested from the editors of a broad range of communication, business, management and social psychology journals. Responses were received from twelve editors. A second group was chosen from a list of authors of textbooks currently used in organizational communication courses as identified by Downs and Larimer (1973). These two methods of identification yielded a list of 107 experts in the area of business and organizational communication.

Given estimates that returns of less than 40 or 50 percent are common on mail questionnaires (Kerlinger, 1973) and an expected Delphi attrition rate of between 30 or 40 percent (Schoeman & Schwartz, 1974), 72 invitations were mailed on July 28, 1974. Recipients were chosen from the original list to create the most geographically dispersed panel possible. A total of 41 responses were received. Twenty-two experts agreed to participate in the study (see Appendix A).

First Questionnaire

In response to the first questionnaire, each recipient who chose to participate was asked to list the 20 communication competencies he thought would be the most essential for businesspersons in 1980.

The first questionnaire was pretested on 10 faculty and graduate students who were teaching courses in business or organizational communication at the University of Texas. Interviews with each of these persons provided information on the effectiveness of the questionnaire. The results of the pretest indicated that an unstructured, open-ended format would generate the greatest variety of responses. Five competencies, chosen from those identified by the pretest subjects, were included in the questionnaire as examples of the types of statements desired.

Evaluation

The purpose of Delphi, as applied in this investigation, was to generate and evaluate the importance of communication competencies. In all rounds after the first, the participants evaluated the importance of the competencies generated during the first round on the following nine-point Likert scale developed by Whitehead & Zacharias (1975):

		Extremely Essential	Very Essential	Somewhat Essential	Essential	Not Very Essential	Unessential	Not At All Essential	
ABSOLUTELY ESSENTIAL	9	8	7	6	5	4	3	2	1 ABSOLUTELY NOT ESSENTIAL

Reliability. The scale was pretested on five faculty members and graduate students at the University of Texas. Subjects used the scale to evaluate the competencies identified in the first Delphi round. Approximately two weeks later, they reevaluated the same items using the same scale. A test-retest reliability coefficient of .83 was obtained. This was judged to be adequate for the purposes of this study.

Consensus

The investigator determined that the mean score assigned to each item (i.e., the average numerical response of the participants for each item) was indicative of the panel's position concerning the importance of that item. Observation of the mean score to indicate consensus has been used by Whitehead & Zacharias (1975) and is currently being used in an SCA Delphi project (Cegala & Bassett, 1975).

Ideally, during the course of the three evaluative rounds, one would hope to observe the range of numerical ratings assigned a particular item to narrow. If the participants move toward a consensus rating (i.e., the mean) the value of the standard deviation should decrease. Gross (1968) used the mean and standard deviation of assigned ratings on a Likert scale to determine consensus on the perceived importance of the goals of a university. Gross established that a standard deviation of less than one was indicative of group consensus on a five-point scale.

Given that the scale used in this study contained nine steps, and assuming individual differences in the use of the scale, a standard deviation of less than 1.5 seemed to be a reasonable criterion for determining consensus. Any rating falling less than 1.5 scale steps above or below the mean score was judged to be within the parameters indicative of consensus.

Results

Two hundred and thirty responses were received from 22 panel members. The 230 statements were analyzed to eliminate all redundant comments. This analysis yielded a list of 89 unique competencies identified as essential by the panel.

INSERT TABLE 1 ABOUT HERE

A reliability estimate of the sorting procedure was obtained using a method devised by Cegala (1974). Two persons working independently eliminated all redundancies from the list of statements yielding three sets of categories:

1. Total Agreement Statements--Those statements that both raters agreed to include or exclude.

2. Agreement-in-Kind Statements--Those statements that essentially identified the same behavior, but were included or excluded by one or the other rater because of the order in which the statements were examined.

3. Disagreement Statements--Those statements that one rater judged unique and the other redundant.

A reliability estimate was obtained by combining the number of total agreement and agreement-in-kind statements and dividing by the total number of objectives. The resulting reliability figure was an estimate of the percentage of agreement between the two sorters.

The author and one volunteer independently sorted the 230 statements to cull redundant comments. The following three sets of competencies were obtained:

1.	Total agreement--Include	67
	Exclude	135
2.	Agreement-in-Kind	8
3.	Disagreement	20

Combining the total agreement figures and the agreement-in-kind figure and dividing by the total number of statements yielded a reliability estimate of .913.

Further discussion between the author and the volunteer sorter on the 20 disagreement items yielded the list of 89 communication competencies. Six of the 20 items were placed within an existing category. The remaining 14, on which there was still disagreement, were included as separate categories on the questionnaire.

Round Two

The competencies identified as unique in Round One were evaluated using the nine-point Likert Scale presented above. Twenty-two responses were received during the second round representing a response rate of 100%. Table 1 indicates the means ($\bar{X}_2$) and standard deviations (SD_2) computed for each item at the conclusion of Round Two.

Round Three

The third questionnaire contained the original list of 89 unique items and the means computed from the Round Two data for each item. As the evaluative measure required whole number responses, all means were rounded to the nearest whole number.

The participants were requested to reevaluate the list of competencies given the panel's position after the second round. Any participant rating an item more than two points above or below the Round Two mean was asked to state his reason for deviating so extremely from the panel's position.

Twenty-one participants (95% of the original panel) returned the third questionnaire. Eighteen panel members made at least one comment concerning the assigned rating of an item with which they disagreed.

The means ($\bar{X}_3$) and standard deviations (SD_3) computed from the third round data are shown in Table 1.

During this round 50 items received comments indicating that at least one participant disagreed with the panel's Round Two position. Eleven of the 50 items received comments supporting opposing positions. For example, "Display integrity and honesty in all communication" received a Round Two mean of 7.50. Comments concerning the panel's rating ranged from "Should be the priority of all 89 items; without it organized living would collapse (9)" to "Honesty isn't necessarily the best policy (4)."

Round Four

The final questionnaire included the list of items and the means computed from the Round Three Data for each item. Participants were requested to reevaluate the importance of the items a final time. Any participant rating an item more than one point above or below the Round Three mean was asked to state his reason

for maintaining a position different from the panel's.

Twenty participants (90% of the original panel) returned completed questionnaires.

The results of the last Delphi round are displayed in Table 1 ($\bar{X}_4$, SD_4). The items are ranked according to the perceived importance of each item in relation to future businesspersons. The rank each item occupied after completion of the third round is shown in parentheses.

Fifty-four items received at least one or more comments. Eleven of the 54 items received comments representing opposing views as explained above.

Conclusion

The purpose of the investigation reported in this paper was to generate a list of competencies considered by experts in the areas of business and organizational communication to be essential to businesspersons in 1980 and obtain consensus from the participants regarding the degree of importance of each item.

Generation

A list of communication competencies considered essential for businesspersons in 1980 was generated during Round One. During the evaluative rounds, a number of participants questioned the specification of some of the originally identified items in relation to the purpose of the study. Certain items originally specified as communication competencies by at least one respondent were judged by others to be outside the realm of specific communication behaviors (e.g., demonstrate a basic understanding of economics; understand and evaluate events happening outside the organization). While these skills are important to businesspersons if they are to function effectively, they are not communication skills. They are peripheral skills which may enhance, but do not contribute directly to the communication process. Knowledge of economics, for example, may enable the individual to communicate using certain terms or concepts, but that knowledge in itself is not a communication behavior.

A second group of competencies was identified as general skills important to all but not peculiarly important to businesspersons (e.g., listen empathetically; write clear, concise, objective messages). Given the nature of this investigation, it seems reasonable to assume that general, as well as specific, skills would be proposed as being essential to future businesspersons. Since future businesspersons will also need to be proficient in general communication skills, those skills should not be excluded from a list of essential communication behaviors.

Consensus

Table 2 shows the changes in standard deviations during the three evaluative rounds.

INSERT TABLE 2 ABOUT HERE

The number of items on which consensus was eventually obtained increased from 18 after Round Two to 74 after the final round. Consensus of expert opinion was reached on approximately 83 percent of the evaluated items.

Although the number of items with a standard deviation less than 1.5 does not differ greatly between rounds three and four, the number of items with a standard deviation less than 1.0 does. The fourth round was particularly useful in refining the degree of consensus among the experts.

The 15 items on which consensus was not obtained are marked with an asterisk in Table 1.

Limitations

Although the results confirm that the investigation succeeded in its stated objectives, two limitations should be noted. The first limitation regards the large number of items generated during Round One. It seems reasonable to assume that some type of rater fatigue set in during the course of the evaluation rounds. This assumption is supported by the response patterns of certain participants regarding the necessity of commenting on ratings markedly different from the panel's mean. A number of participants, especially during the third round, rated items two or more scale values above or below the panel mean, but did not comment on their evaluation. Had there been fewer items to evaluate respondents could have devoted more time to each particular decision and would have been more likely to comment when they differed.

A second problem concerns the possible production of artificial consensus. In a RAND report critical of the Delphi technique, Sackman (1974) concludes that consensus is forced because conformity, in terms of group means, is encouraged and dissidence penalized. As one participant commented concerning the requirement that individuals differing by a certain scale value report reasons for so doing: "This is greatly inhibiting! Why not require everyone to state a reason whether they differ or not." Unfortunately, the number of items combined with the number of participants prevented this (i.e., if 20 participants had each commented on 89 items, an unmanageable total of 1780 comments would have been received during each round).

Discussion

The results of Round Four clearly indicate that students entering the business arena in 1980 must possess a multitude of communication and communication related skills. Courses designed to enhance one set of communicative skills, such as technical writing or public speaking, will no longer suffice as the sole communication requirement for undergraduate business and professional students.

The 50 items ranked as at least "somewhat essential," excluding those competencies on which consensus was not obtained, illustrate the multi-dimensional trends future business communication courses must be designed to meet. Individual items can be grouped in a number of categories of related competencies as shown in Table 3. Competencies were assigned to a category based on either the similarity of the key words used to describe that competency, or the similarity of the implications of the specific competency to the communication process.

INSERT TABLE 3 ABOUT HERE

The categories are defined as follows:

1) Human relations--items indicating that future businesspersons need "to relate to and be sensitive to the needs of others (Di Salvo, et al., 1974)."

2) Interviewing--items indicating a need for future businesspersons to seek information from others.

3) Listening and Feedback--items associated with effective listening and feedback skills.

4) Message--items oriented toward the content and perception of meaning of messages.

5) Organizational Functions--items broadly related to the functioning of organizations as those functions affect interpersonal communication. The high ratings given most of these items seems to point to an increasing degree of importance attached to the environmental conditions in which businesspersons will operate as communicators.

6) Personnel Relationships--items related to subordinate/superior interactions.

7) Power and Conflict--items indicating a need to be able to resolve conflict and potential conflict situations within the organization.

8) Small Groups--items related to the needs of small groups.

9) Theory--items related to a broad understanding of the communication process.

Four items cannot be categorized as belonging to a particular group of related items:

1) Select for each particular situation the most appropriate communication strategies.

2) Interpret nonverbal cues accurately.

3) Read and understand large amounts of material quickly.

4) Understand and evaluate events happening outside the organization.

Examination of the items rated as only "essential" or less in Table 1 indicates that some of the skills generally assumed to be necessary may not be as important in the near future. For example, "Speak effectively to a variety of

audiences" and "Persuade others to one's own viewpoint," although rated "essential," were only ranked 64 and 66 respectively. The findings indicate that a variety of skills geared towards enhancing the individual's ability to communicate within organizational settings will be required by those entering the business arena in the near future.

The statements of competencies ranked as the most essential for businesspersons in 1980 must now be translated into educational objectives. Because the focus of this research was future-oriented, the educational objectives derived from the identified needs will be future-oriented as well. Given the requirements of educational accountability, more confidence can be placed in the benefit of educational objectives constructed from the list of skills identified in this study than those constructed based on the results of previous investigations.

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NOTES

[1]This paper is based upon the MA thesis of the author under the direction of Dr. D. W. Zacharias at the Department of Speech Communication at the University of Texas, Austin, Texas.

[2]The term "business communication" will be used throughout this paper to refer to all courses designed to enhance the student's ability to communicate in a work environment. The term is inclusive of courses in business as well as organizational communication.

[3]For a more detailed description of the Delphi process see Dalkey, N. Delphi, P-3704. Santa Monica, Calif.: RAND Corporation, 1967; Helmer, O. The use of the delphi technique in problems of educational innovation, P-3499. Santa Monica, Calif.: RAND Corporation, 1966; Pfeiffer, J. New look at education. Poughkeepsie, New York: Odyssey Press, 1968.

APPENDIX A

Panel Participants*

E. P. Bettinghaus, Department of Communication, Michigan State University

R. H. Blake, Department of Sociology, Brigham Young University

J. K. Brilhart, Department of Speech, University of Nebraska

R. M. Carter, Department of Communication & Organizational Behavior, General Motors Institute

F. E. X. Dance, Department of Speech Communication, University of Denver

C. W. Downs, Department of Speech & Drama, University of Kansas

R. V. Farace, Department of Communication, Michigan State University

R. D. Gieselman, University of Illinois

R. H. Hall, Department of Sociology, University of Minnesota

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C. M. Logue, Department of Speech, University of Georgia

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W. C. Redding, Communication Research Center, Purdue University

H. W. Simons, Department of Speech, Temple University

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D. W. Zacharias, Department of Speech Communication, University of Texas

*This list includes only those individuals who gave permission to include their names by the time this paper was reproduced.

TABLE 1

Final Rank Ordering

COMPETENCY (Rank Ordered)	$\bar{X}_2$	$\bar{X}_3$	$\bar{X}_4$	SD_2	SD_3	SD_4
1. Understand that we never have complete control over how our messages may be interpreted (8).	6.77	7.57	8.10	2.202	1.207	.447
2. Deal constructively with conflict situations that arise within the organization (3).	8.05	7.91	7.91	1.046	.869	.625
3. Communicate laterally within an organization (3).	7.41	7.91	7.91	1.052	1.136	.889
4. Communicate downward within an organization (2).	7.50	8.29	7.86	1.535	.889	.854
5. Communicate upward within an organization (1).	7.50	8.14	7.81	1.535	.727	.873
6. Solicit feedback from those with whom he communicates (6).	7.68	7.71	7.81	1.287	1.102	.928
7. Recognize the tendency of subordinates not to express their negative reactions or problems (9).	7.05	7.52	7.80	1.532	1.250	1.056
7. Recognize the effects of power and status differences on communication behaviors (9).	7.05	7.52	7.80	1.495	1.078	.834
9. Recognize both the social and task-oriented needs of groups (7).	7.50	7.62	7.76	1.596	1.322	.539
10. Recognize that meaning is in people (12).	7.09	7.45	7.50	1.974	1.317	1.000
11. Provide feedback to those with whom he communicates (18).	7.46	7.33	7.48	1.299	1.197	.928
12. Understand the role of perception in the interpretation of information (29).	6.82	6.95	7.35	1.532	1.203	.933
13. Listen empathetically (23).	7.00	7.10	7.29	1.604	1.261	1.007
14. Understand the role structure of organizations and how role expectations influence communication behavior (29).	6.91	6.95	7.20	1.630	1.161	.768
14. Review the performances of subordinates without creating defensive reactions (18).	7.14	7.33	7.20	1.670	1.426	1.152
16. Communicate to the "right" people within the organization (43).	6.46	6.57	7.19	1.101	1.076	1.031
17. Select for each particular situation the most appropriate communication strategies (13).	7.09	7.43	7.14	1.306	.870	.854
17. Anticipate the communication needs of those with whom he works (15).	6.77	7.38	7.14	1.270	.974	.854
19. Organize facts and data in easily understood, meaningful patterns (13).	7.23	7.43	7.10	1.193	1.028	.625
19. Negotiate effectively with other organizational units (25).	7.00	7.05	7.10	1.633	1.244	.436
19. Display integrity and honesty in all communications (15).	7.50	7.38	7.10	1.819	1.431	1.252
22. Understand the differences between one-way and interactive interpersonal communication (37).	6.77	6.71	7.05	1.716	1.231	.826
22. Evaluate the impact of his personal communication habits and patterns upon the organization (25).	6.64	7.05	7.05	1.560	.921	.826
24. Write clear, concise, objective messages (32).	7.18	6.81	7.00	1.622	1.470	.837
24. Handle "touchy" situations tactfully (20).	7.05	7.24	7.00	1.253	1.375	.795
26. Avoid relying on single information sources (39).	7.05	6.62	6.95	1.558	1.565	.740
26. Understand the language patterns and needs of minority groups and women in the organization (43).	6.41	6.57	6.95	1.563	1.207	.945
28. Recognize the limitations of his own inquiry system and that of others (28).	7.00	7.00	6.90	1.604	1.095	.912
28. Understand and compensate for own and other's biases (29).	6.64	6.95	6.90	1.529	1.322	1.119

Note: The number in parentheses indicates the rank assigned the item after the third round.

TABLE 1 continued

COMPETENCY (Rank Ordered)	$\bar{X}_2$	$\bar{X}_3$	$\bar{X}_4$	SD_2	SD_3	SD_4
30. Analyze motivating factors of self and others in interpersonal interactions (35).	6.50	6.76	6.85	1.504	1.339	.875
*31. Handle emotions in self and others (15).	7.09	7.38	6.75	1.509	1.303	1.618
*31. Recognize the limits of one's own and others' power (11).	7.14	7.48	6.75	1.670	.814	1.6[illegible]
31. Form a valid image of self and others (21).	6.68	7.14	6.75	1.810	1.526	1.327
34. Distinguish between various types of statements (factual, inferences) (45).	6.86	6.52	6.71	1.552	1.250	1.384
*34. Cope with failure (5).	7.46	7.76	7.71	1.535	1.300	2.171
*36. Accept a variety of perspectives on human experiences (23).	6.73	7.10	6.70	1.486	1.338	1.593
36. Understand the determinants of morale (25).	6.77	7.05	6.70	1.541	1.322	.923
38. Conduct information seeking interviews (39).	6.50	6.62	6.67	1.504	1.284	.658
39. Interpret nonverbal cues accurately (38).	6.68	6.67	6.62	1.359	1.155	.669
40. Identify concepts and supporting arguments of others (39).	6.27	6.62	6.60	1.420	1.117	.995
40. Recognize that the nature of the relationship between persons is a product of the interaction between them rather than of the traits or behavior of any person individually (50).	5.96	6.38	6.60	1.731	1.317	1.429
*42. Demonstrate awareness of the many social and cultural factors which affect communication (32).	6.86	6.81	6.57	1.726	1.470	1.599
43. Discriminate among various managerial and leadership styles (50).	6.32	6.33	6.52	1.756	1.560	1.031
44. Understand the concepts of communication networks and recognize potential problem areas (60).	6.32	6.10	6.35	1.810	1.446	1.424
44. Understand the determinants of productivity (47).	6.32	6.48	6.35	2.033	1.365	.878
46. Restate statements made by others to reflect their meaning accurately (54).	6.18	6.75	6.25	2.174	1.164	.995
47. Tolerate considerable ambiguity in responses to messages (36).	5.55	6.19	6.24	2.154	1.563	1.300
47. Avoid semantic breakdowns of communication (57).	6.32	6.24	6.24	1.492	1.338	1.209
*49. Display a willingness to grow psychologically on the job (21).	6.64	7.14	6.20	1.643	1.195	1.908
49. Demonstrate versatility in the use of questions (64).	6.46	5.91	6.20	1.262	1.091	.769
51. Read and understand large amount of material quickly (54).	6.05	6.24	6.19	1.230	1.446	1.289
52. Demonstrate skill in giving and testing employee or subordinate understanding of instructions (58).	5.86	6.14	6.15	1.870	.964	1.089
*53. Display an attitude of openness, candor and trust in all interpersonal interactions (39).	6.73	6.62	6.14	1.856	1.502	1.[illegible]2
*54. Exert influence or speak out without jeopardizing one's own position (53).	5.95	6.29	6.11	1.802	1.384	1.524
*55. Withstand criticism even when it may be unwarranted (34).	6.91	6.90	6.10	1.630	1.705	1.786
55. Demonstrate insight into communication problems associated with functional segmentation (60).	6.05	6.10	6.10	1.864	1.261	.912
57. Effectively apply small group research findings to organizational settings (69).	5.64	5.62	6.05	1.761	1.565	1.050

TABLE 1 continued

COMPETENCY (Rank Ordered)	$\bar{X}_2$	$\bar{X}_3$	$\bar{X}_4$	SD_2	SD_3	SD_4
58. Understand and evaluate events happening outside the organization (46).	6.18	6.50	6.00	1.790	1.396	1.049
58. Understand the behavioral process of communication (49).	6.77	6.43	6.00	1.501	1.502	1.000
60. Direct conferences for maximum productivity (50).	6.50	6.33	5.95	1.504	1.155	.740
* 60. Take comfort in delegating and coordinating the work of lower echelon personnel to whom delegated authority has been granted (62)	6.00	5.95	5.95	1.761	1.565	1.820
62. Deal with problems of information load (over and under) (66).	6.41	5.76	5.91	1.469	1.044	.768
63. Summarize and abstract materials for self and others (58).	5.73	6.14	5.90	1.518	1.195	1.119
64. Speak effectively to a variety of audiences (47).	6.68	6.48	5.86	1.427	1.289	.910
65. Recognize the practical implications of redundancy within the organization (66).	5.50	5.76	5.80	1.766	1.221	.894
66. Persuade others to one's own viewpoint (69).	5.55	5.62	5.76	1.262	.921	.944
66. Recognize that the organizational reward structure may be more a function of conformity and loyalty than performance (68).	5.55	5.67	5.76	1.845	1.623	1.044
68. Understand and apply the findings of organizational research (64).	5.96	5.91	5.71	1.731	1.480	.845
69. Demonstrate skill in orienting new employees to the business so they get a progressively more detailed view of the organization and their role in it (62).	5.73	5.95	5.70	1.549	1.117	.923
* 70. Demonstrate understanding of decision making theory (76).	5.41	5.24	5.55	2.501	1.513	1.538
* 71. Distinguish between the Verbal World and Real World (56).	6.14	6.20	5.47	2.867	1.399	1.954
72. Demonstrate a basic knowledge of the laws affecting the collecting, storing, and use of personal information collected from and about employees (77).	5.18	5.10	5.15	1.893	1.758	1.226
73. Use appropriate components and formats in written messages (74).	5.27	5.38	5.10	2.097	1.396	1.119
74. Demonstrate an understanding of communication theory (72).	5.18	5.48	5.00	2.108	1.504	1.183
75. Describe the persuasive impact of various media in presenting the image of the organization to external audiences (78).	4.73	4.76	4.85	1.856	1.578	.988
76. Use the latest (1980) developments in information storage and retrieval hardware (80).	5.18	4.62	4.67	1.893	1.359	1.111
77. Understand and use the "private language" of occupation specialties (73).	5.40	5.43	4.57	1.698	1.028	.746
77. Use the tools of communication research (82).	4.59	4.14	4.57	1.919	1.315	1.434
79. "Buy" communication services in the form of research or consulting (78).	4.73	4.76	4.52	1.831	1.300	.750
* 80. Focus attention on those organizational symbols which will direct the creative energies of the organization to the desired end (74).	6.00	5.38	4.40	2.024	1.962	1.930
81. Demonstrate a basic understanding of economics (71).	5.64	5.50	4.38	2.105	1.318	1.322
* 82. Play a deviant role constructively (83).	4.41	4.05	4.30	2.240	1.936	2.080
83. Maintain parliamentary order during meetings (84).	4.05	3.95	4.00	1.786	1.396	1.140
84. Serve an internship in an organization (81).	4.41	4.24	3.86	1.623	1.261	.727
85. Do independent research (86).	3.68	3.57	3.81	2.102	1.469	.680
86. Demonstrate flexibility in dialectics and language patterns (87).	3.96	3.38	3.60	2.035	1.774	.320
87. Direct small groups in using computer-yielded data in solving complex problems (85).	4.36	3.62	3.55	1.620	1.284	1.050
* 88. Form and use a conflictual, policy, dialectical delphi (88).	3.65	2.65	2.58	1.902	1.725	1.805
89. Speak two or more foreign languages (89).	2.68	2.43	1.76	1.249	.978	.700

TABLE 2

Changes in Standard Deviations

Indicating Consensus

SD Categories	Round		
	2	3	4
SD < 1.0	0	10	45
SD < 1.5	18 (18)	61 (71)	29 (74)
SD > 1.5	58	18	13
SD > 2.0	13	0	2
	89	89	89

Note: SD < 1.5 indicates consensus. Number in parentheses is the total number of items on which consensus was obtained for that round.

TABLE 3

Skill Categories

HUMAN RELATIONS

19. Display integrity and honesty in all communications.
28. Recognize the limitations of his own inquiry system and that of others.
28. Understand and compensate for own and another's biases.
30. Analyze motivating factors of self and others in interpersonal interactions.
31. Form a valid image of others.
36. Understand the determinants of morale.
40. Recognize that the nature of the relationship between persons is a product of the interaction between them rather than of the traits or behavior of any person individually.

INTERVIEWING

38. Conduct information seeking interviews.
49. Demonstrate versatility in the use of questions.

LISTENING AND FEEDBACK

5. Solicit feedback from those with whom he communicates.
11. Provide feedback to those with whom he communicates.
13. Listen empathetically.
46. Restate statements made by others to reflect their meaning accurately.

MESSAGE

1. Understand that we never have complete control over how our messages may be interpreted.
10. Recognize that meaning is in people.
12. Understand the role of perception in the interpretation of information.
19. Organize facts and data in easily understood, meaningful patterns.
24. Write clear, concise objective messages.
26. Avoid relying on single information sources.
34. Distinguish between various types of statements (factual, inferences).
40. Identify concepts and supporting arguments of others.
47. Avoid semantic breakdowns of communication.
47. Tolerate considerable ambiguity in responses to messages.

ORGANIZATIONAL FUNCTIONS

2. Communicate laterally within an organization.
4. Communicate downward within an organization.
5. Communicate upward within an organization.
14. Understand the role structure of organizations and how role expectations influence communication behavior.
16. Communicate to the "right" people within the organization.
17. Anticipate the communication needs of those with whom he works.
22. Evaluate the impact of his personal communication habits and patterns upon the organization.
44. Understand the concepts of communication networks and recognize potential problem areas.
55. Demonstrate insight into communication problems associated with functional segmentation.

Note: Categories are alphabetically arranged.
Numbers refer to rank in Table 1.

PERSONNEL RELATIONSHIPS

7. Recognize the tendency of subordinates not to express negative reactions or problems.
14. Review the performances of subordinates without creating defensive reactions.
24. Handle "touchy" situations tactfully.
26. Understand the language patterns and needs of minority groups and women in the organization.
52. Demonstrate skill in giving and testing employee or subordinate understanding of instructions.

POWER AND CONFLICT

2. Deal constructively with conflict situations that arise within the organization.
7. Recognize the effects of power and status differences on communication behaviors.
19. Negotiate effectively with other organizational units.

SMALL GROUPS

9. Recognize the task-oriented and social needs of groups.
43. Discriminate among various managerial and leadership styles.
57. Effectively apply small group research findings to small groups within organizational settings.

THEORY

22. Understand the differences between one-way and interactive interpersonal communication.
58. Understand the behavioral process of communication.

Note: Categories are alphabetically arranged.
Numbers refer to rank in Table 1.